Claims

[c1]   What is claimed is:

1. An interleaved local suspend and reset method for a wireless communications system, the wireless communications system comprising a first station in wireless communications with a second station along at least one channel, the method comprising:

the first station initiating a local suspend function for the channel, a suspend point determined by a first sequence number (SN);

prior to a resume command to terminate the local suspend function, initiating a reset procedure for the channel;

in response to the reset procedure, setting the first SN of the suspend point equal to a default value; and

awaiting the resume command for the channel to terminate the local suspend function.

[c2]   2. The method of claim 1 wherein setting the first SN of the suspend point equal to the default value causes the first station to thereafter immediately halt transmission of layer 2 protocol data units (PDUs) to the second station along the channel while the local suspend function for the channel is active.

[c3]   3. The method of claim 2 wherein the suspend point comprises a hyper-frame number (HFN) associated with the SN of the suspend point, and in response to the reset procedure, the HFN is set equal to a transmitting HFN of the first station.

[c4]   4. The method of claim 1 wherein a prior ciphering configuration for the channel is used before the resume command, and a new ciphering configuration is used for the channel after the resume command.

[c5]   5. An interleaved local suspend and reset method for a wireless communications system, the wireless communications system comprising a first station in wireless communications with a second station along at least one channel, the method comprising:

the first station initiating a local suspend function for the channel, a suspend

point determined by a first sequence number (SN) and a first hyper-frame number (HFN) to form a first HFN/SN pair;

prior to a resume command to terminate the local suspend function, initiating a reset procedure for the channel;

after the reset procedure, and prior to terminating the local suspend function, the first station transmitting along the channel to the second station no layer 2 protocol data units (PDUs) having associated HFN/SN pairs that are sequentially after the first HFN/SN pair; and

awaiting the resume command for the channel to terminate the local suspend function.

[c6]   6. The method of claim 5 wherein a prior ciphering configuration for the channel is used before the resume command, and a new ciphering configuration is used for the channel after the resume command.

[c7]   7. The method of claim 5 wherein after the reset procedure, and prior to terminating the local suspend function, the first station transmits along the channel to the second station layer 2 PDUs having associated HFN/SN pairs that are sequentially before the first HFN/SN pair.